GlobalOptions Group

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Debris Management Planning

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FEMA Debris Management Plan Requirements

I. Staff Roles and Responsibilities

A. Staffing Organizational Chart (NIMS Compliant)
B. Roles and Responsibilities
C. Emergency Communications Plan
D. Health and Safety Plan and Procedures
E. Training Schedule

II. Situation and Assumptions

A. Design Disaster Event
B. Forecasted Debris

III. Debris Collection Plan

A. Priorities
B. Response Operations
C. Recovery Operations
    1. Estimating Staff, Procedures and Assignments
    2. Collection Method
    3. Hazardous Materials and White Goods
    4. Monitoring

FEMA Debris Management Plan Requirements

IV. Debris Management Sites
   A. Site Management
   B. Establishment and Operations Planning

V. Contracted Services

VI. Private Property Demolition and Debris Removal

VII. Public Information Plan

Appendices

Maps of Jurisdiction and Priorities
Staffing Assignment Maps
Load Ticket
Debris Monitor Reports
Truck Certification List
Load Ticket System

Developing Debris Management Plans

DMPs should not be developed in isolation

- Multiple departments within jurisdiction
  - Transportation
  - Legal
  - Waste Management
  - Finance
- External agencies with regulatory authorities over debris operations
  - Environmental Quality
  - Historic Preservation
  - Hazardous Materials
- External agencies with debris clearance, removal and disposal responsibilities
  - State Department of Transportation
  - National Guard
  - State Police
  - State Emergency Management

Developing Debris Management Plans

- Involve departments that will participate in debris management and operations in the development of the DMP
  - Thorough documentation of responsibilities and functions
  - Identification and development of procedures
  - Facilitates interaction between departments and “ownership” of DMP
- Coordination with external agencies
  - Ensure current regulatory requirements identified
  - Identify external debris clearance, removal and disposal responsibilities
  - Establish coordination and communication procedures
  - Develop working relationship
- Research/Coordinate with Private Industry
  - Coordinate waste disposal and debris operations
  - Private landfill sites
  - Identify potential contract support for debris operations, pre-identify and pre-qualify contractors

Design Disaster Event

Where to start?

Rather than starting at I. Staff Roles and Responsibilities and working through the outline, consider developing a scenario to aid in identification of personnel and resource requirements and development of plans and procedures.

- Design Disaster Event
  - Disaster scenario that would require debris operations
  - Developing a design disaster event can assist in development of forecast debris quantities and types, allowing better defined scope of work for the debris management operations.
  - Can be used to determine the required response and recovery resources, the number and size of storage and reduction sites, and the final disposition of the disaster related debris.

Debris Forecasting – Situation & Assumptions

- Debris Forecasting vs. Debris Estimating
  - Debris Forecasting is predicting the amount of debris **prior** to a disaster event
  - Debris Estimating is quantifying the amount of debris **after** the disaster
- Forecasting Methods
  - Historical data for your area, what types and quantities of debris disasters have generated in the past. The design disaster event should be within reason and take into account historic events while considering current conditions such as building codes, new developments and flood plain changes.
  - Community Based Analysis – Identify area land use characteristics and representative samples of debris for each, use formulas (available in FEMA-325 publication: http://www.fema.gov/government/grant/pa/demagde.shtm) to forecast debris types and quantities.
  - Computer modeling using GIS or commercial software.

Debris Forecasting – Situation & Assumptions

Debris Types

- Different handling and disposal methods are required for particular debris types. Separate debris streams for debris requiring different handling, processing and disposal.
  - Vegetative
  - Construction and Demolition (C&D)
  - Personal Property/Household Items
  - Hazardous Waste
  - Household Hazardous Waste (HHW)
  - White Goods (ovens, refrigerators, washing machines, etc.)
  - Soil, Mud and Sand
  - Vehicles and Vessels
- Debris Locations
  - Land use provides information about the types of debris that will be generated

Debris Management Plan

- After estimating the types and quantities of debris begin to consider the following for development of the DMP:
  - How many debris sites will be needed to maintain efficient operations?
  - What collection methods will be utilized?
  - How many collection passes will be needed?
  - Will contractors be utilized in debris operations?
  - What are the priorities (roads/facilities) for emergency clearing?
  - What resources (both personnel and equipment) will be required to collect, reduce, dispose, and manage debris operations?
  - What special hazard debris issues may your community face?
  - What recycling and reduction methods will be utilized?
  - Should traffic control measures be implemented to aid debris hauling?

Debris Collection Strategy

Collection operations are normally broken into two phases:

- Response – Occurs sometimes during and always immediately after an event in order to clear emergency access routes
  - Identify roads and streets essential to emergency operations to prioritize and direct efforts, rescue and evacuation of people, and provide access to hospitals, operational facilities, distribution centers
  - Identify areas for possible State and mutual aid assistance
- Recovery – Operations usually begins after the emergency access routes are cleared and residents return to their homes and begin to bring debris to the public rights-of-way
  - Focus is clearing non-critical routes, collecting, reducing, recycling and disposal of debris
  - Implement debris collection immediately after disaster event
  - Primary methods are curbside collection and collection centers, both may be used

Debris Collection Strategy

- Curbside Collection
  - Parallels normal garbage and trash collection operations
  - Debris is placed at the curb on public rights-of-way by residents for collection
  - Mixed Debris permits residents to place all debris types in one area
    - Does not facilitate effective recycling and reduction efforts
    - Requires sorting of debris prior to recycling/reduction efforts
  - Segregated Debris Collection requires residents to sort debris by material type and place in separate piles.
    - Each type of debris is picked up by separate trucks and delivered to appropriate debris management site
    - Requires more trucks for collection but reduced labor
- Collection Centers
  - Residents transport debris to a common location
    - Separate bins provided for different types of debris
    - Requires site planning and management

Debris Collection Strategy

- Development of the debris collection strategy will assist in identifying:
  - Priorities for debris clearing
  - Assistance opportunities from state and mutual aid
  - Collection method
  - Estimating staff or contract requirements and assignments
  - Documentation procedures for handling various types of debris
  - Collection center locations, layout and environmental controls (liners and berms)
  - Begin consideration of special disposal requirements and identify disposal sites
  - Monitoring staff requirements and assignments
  - Agency coordination requirements
  - Pre-scripting public information announcements

Debris Management Sites (DMS)

- Established when debris cannot be taken directly to final disposal sites
- Provide location to store, reduce, segregate and/or process debris prior to final disposal, adds flexibility to debris operations
- DMS should be identified prior to disasters to complete environmental and historic preservation reviews
- Increased costs for handling materials twice, may require leasing land, requires planning, engineering, permitting and site management
- Debris Site Management Plan should be developed for each DMS including layout, engineering preparation, environmental monitoring, debris monitoring, safety, reduction methods, ingress and egress, environmental compliance and other permits, and site closure

Debris Management Sites (DMS)

DMS Selection Criteria

- Ownership of land
- Size
- Location
- Environmental and historic concerns

Monitoring Debris Removal

Debris monitoring procedures should be established and included in the debris management plan. Failure to document eligible work and costs may jeopardize Public Assistance grants and reimbursement.

- Verifies that the work completed by the contractor is within the contract scope of work
- Provides the required documentation for Public Assistance grant reimbursement
- Force account resources, contractors, or combination can be utilized
- Only FEMA has the authority to make eligibility decisions
- Monitors must be properly trained

Monitoring Debris Removal

- By positioning monitors at each point of the operations (collection, DMS, and/or final disposition) the eligible scope of work can be properly documented.
  - Develop Debris Monitor Reports to track time and materials contracts and monitor collection and disposal
  - Truck certification list to document capacity/weight of trucks
  - Load ticket system tracks the debris from collection site to DMS
- Debris Monitor Roles
  - Verify the type of debris, location of collection and amount collect are within the scope of the contract
  - Control load ticket processing in field and DMS towers
  - Validate eligibility of debris and segregation of debris types
  - Report issues concerning safety, compliance, and scope of work to project manager

Debris Management Plan

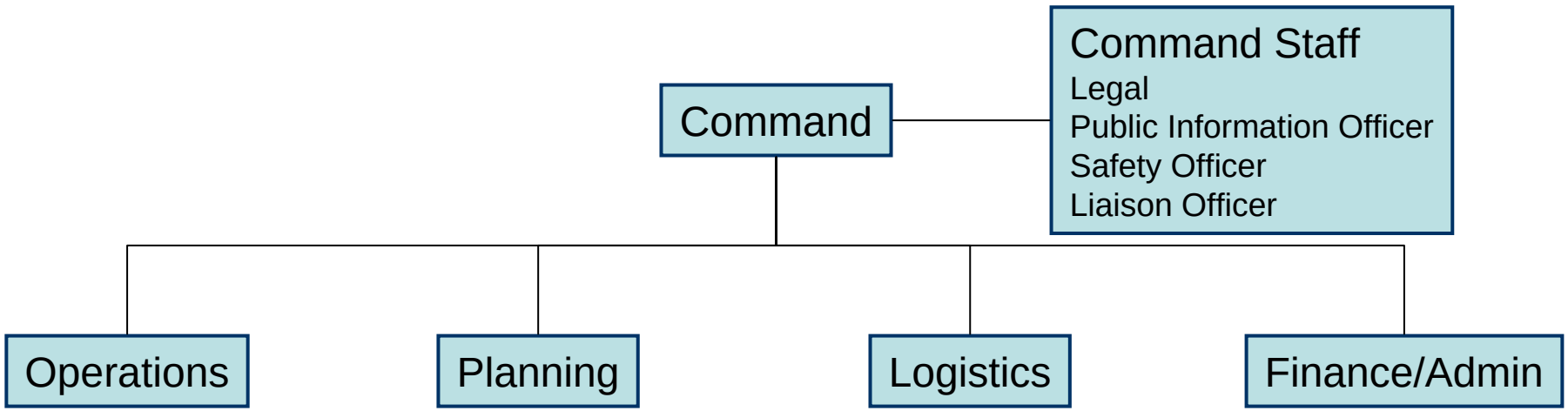
At this point you have developed your Situation and Assumptions, Debris Collection Plan and Debris Management Sites to some extent

Utilizing this information develop:

- Personnel requirements for operations, management, and monitoring
- Determine if contract support will be necessary
- Equipment and resource needs
- Collection plans for development of Public Information templates
- Plans, procedures and guidance for debris operations

Staff Organization and Structure

- Staff size and composition will depend on the magnitude of the disaster, number of DMS, collection plan, and jurisdictional area.
- Organization structure should be NIMS compliant and accommodate scalable response. For a small event multiple functions may be filled by a single individual.
- While the departments or personnel filling positions may vary by name, all debris operations should have the following functions:



Staff Roles and Responsibilities

- Debris Project Manager (Command) - Primary decision maker responsible for overall operations, planning, logistics and cost of debris management operations.
- Finance and Administration - Must establish records management system to collect and maintain all documentation that may be required for PA grants and reimbursement from FEMA.
- Contracting - Develop draft debris contracts ready for advertisement or have pre-qualified contractors in place prior to an event.
  - 44 CFR Part 13 Code of Federal Regulations
  - FEMA Contracting Fact Sheet: http://www.fema.gov/government/grant/pa/9580_201.shtm
- Legal (Command Staff) - Leads review for legal matters
- Public Information Officer (Command Staff) - Distributes information and educates citizens and officials about the debris operations.

Staff Roles and Responsibilities

- Operations - Responsible for the supervision of government and contract resources and overall implementation of the debris operations
- Engineering/Planning - Supports all debris management sections in a technical role, provides debris quantity assumptions, economic analysis, and recommendations for debris operations
- Safety Officer (Command Staff) - Health and Safety Plan and Procedures
- Public Information Officer (Command Staff) - Ensure that residents are given accurate and timely information for their use and their planning purposes
- Logistics – Provides support needs for debris operations including ordering resources and supplies through procurement process.

Private Property Demolition and Debris Removal

PPDR and Demolition is not common, usually extreme cases where public health, life, safety, and economic recovery of the community are at risk.

- Plan should include:
  - Criteria for implementing PPDR and demolition operations
  - Documentation requirements and procedures
  - Inspection and demolition procedures
  - Plan to include the private property owner in decisions and operations
- Document and labor intensive operation
  - Requires legal documentation for demolition, including environmental compliance, rights of entry, condemnation procedures, permitting and inspections

PA Pilot Program & Debris Guidance

DHS Appropriations Act, 2007, Public Law 109-295

PA Pilot Program provides incentives for communities to develop FEMA approved Debris Management Plans.

Public Assistance Debris Management Guide, FEMA-325

http://www.fema.gov/government/grant/pa/demagde.shtm

Private Property Debris Removal

http://www.fema.gov/government/grant/pa/9523_13.shtm

Private Property Demolition

http://www.fema.gov/government/grant/pa/9523_4.shtm

Hazardous Stump Removal Eligibility

http://www.fema.gov/government/grant/pa/9523_11.shtm